

**INDOOR AIR QUALITY AT INDUSTRIAL FACILITIES WITH  
RCRA CORRECTIVE ACTION:  
DO EPA OR OSHA STANDARDS APPLY?**

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NOTICE TO READER: In response to criticisms by this author and others, EPA recently issued a draft guidance on vapor intrusion that, if it becomes final, will clarify that at industrial facilities OSHA has exclusive jurisdiction over indoor air quality in the work place even if the facilities are subject to environmental cleanup requirements under federal hazardous waste laws administered by EPA.
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**A. Introduction**

Traditionally OSHA, not EPA, has regulated indoor air quality in the workplace. OSHA's standards, although strict, are more lenient than EPA's guidance generally would allow. Recently, some EPA regions have claimed regulatory jurisdiction over indoor air quality at industrial facilities where RCRA corrective action is occurring. This author argues that OSHA has exclusive jurisdiction over indoor air quality in the workplace, and EPA's attempted preemption of OSHA's authority at RCRA corrective action facilities is contrary to statute, conflicts with a November 23, 1990 OSHA/EPA Memorandum of Understanding, and ignores the EPA Administrators' own public statements. Moreover, as a practical matter OSHA is better equipped to safeguard worker health, whereas EPA's efforts to establish indoor-air standards have been heavy-handed and unrealistic.

Until recently the Occupational Safety & Health Administration ("OSHA") as well as the regulated community assumed that indoor air quality at the workplace was governed by OSHA regulations and that releases of chemicals into the environment and the health exposures resulting from such releases were subject to EPA authority under Superfund and the Resource Conservation Recovery Act ("RCRA"). Some EPA regions, however, have taken the position that EPA's risk-based standards, and not the OSHA standards, apply to indoor air quality at industrial sites with RCRA corrective action. At the present time, the limits of EPA's risk-based decision making are being debated with respect to indoor air quality at such industrial sites.

Who has jurisdiction over indoor air quality at an industrial facility if EPA uses Section 3008(h) of RCRA to address soil and groundwater contamination at the same facility? Indoor air quality may become an issue as a result of vapors from contaminated soils or groundwater intruding into buildings. In that situation, can EPA require that the potential air contamination be addressed under RCRA corrective action authority if the air concentrations exceed risk-based levels established by EPA guidance even if the levels do not exceed the regulatory standards promulgated by OSHA for the industrial workplace? If EPA has jurisdiction under RCRA to address worker exposure to indoor air concentration levels, can EPA require corrective action based on risk-based levels established by EPA guidance? Is it appropriate for EPA to determine that EPA's risk-based levels

have been exceeded by using results generated from the application of models? The following discussion will focus on answers to these questions.

**B. OSHA, Not EPA, Has Jurisdiction to Address Worker Health at Corrective Action Sites.**

**1. RCRA Assigns EPA a Support Role in the Protection of Worker Health.**

RCRA provides for a support role for EPA in delineating the duties between EPA and OSHA. In particular, 42 U.S.C. § 6971(f) requires that EPA provide information to the Secretary of Labor and the Director of the National Institute for Occupational Safety & Health to assist those agencies in “carrying out their duties under the Occupational Safety & Health Act.” Congress made the choice that EPA’s role regarding the protection of industrial workers should be to assist OSHA in enforcing existing standards rather than developing a separate set of standards. *See United States v. John Borowski*, 977 F.2d 27, 31 (1<sup>st</sup> Cir. 1992) (explaining that RCRA exhibits explicit concern for industrial health by “requiring the EPA to provide information about employee hazards to the Secretary of Labor and OSHA for OSHA enforcement purposes”). When EPA tries to enforce its own standards, that action conflicts with RCRA’s requirement that EPA should act to assist OSHA.

**2. The OSHA/EPA Memorandum of Understanding Clarifies Each Agency’s Responsibilities.**

EPA is not only directed by statute to defer to OSHA regarding industrial worker health, but has also agreed to defer to OSHA in a memorandum of understanding with OSHA. In 1990, EPA and OSHA entered an official memorandum of understanding (“MOU”), which delineates the general areas of responsibility for each agency. *See* “Memorandum of Understanding Between the U.S. Department of Labor, Occupational Safety and Health Administration and the U.S. Environmental Protection Agency,” Office Enforcement (November 23, 1990). The MOU references the statutory authority of each agency, describes goals for coordination of activities, delineates the areas of responsibility of each agency, and describes the mutual activities of each agency with respect to inspections and referrals for enforcement.

Section II of the MOU delineates the responsibilities of each agency. Section II.A. of the MOU states that EPA’s responsibilities include “protection of public health and the environment by assuring compliance with federal environmental statutes and regulations.” *Id.* at 2. Section II.B. states that the responsibility of OSHA is “to assure so far as possible every working man and woman in the nation safe and healthful working conditions.” *Id.* To achieve that purpose, OSHA has the authority to promulgate and enforce “mandatory safety and health standards for private sector workplaces.” *Id.* This language represents the understanding of the agencies regarding their respective general areas of responsibility, and the agreement of the agencies that OSHA, not EPA, has the authority to promulgate and enforce health and safety regulations for private sector workplaces. This delineation of duties does not indicate that EPA has authority to require private sector employers, already subject to OSHA indoor workplace standards, to also comply with stricter EPA limits for the same workplace.

It is the intent of the MOU to avoid the potential of overlapping and different OSHA and EPA safety and health standards that otherwise might be applied to the same workplace. The MOU

deliberately does not empower either agency to adopt or enforce standards that would apply to areas where the other agency has already adopted standards; instead, the MOU sets up a process for each agency to refer to the other any information relating to observed potential violations of the other agency's standards.

For example, in Section III.B., the MOU refers to the potential that EPA and OSHA inspectors may discover violations of the other agency's laws and regulations, and directs that referrals to the appropriate offices will be undertaken as described in Subsection C, "Referrals." *Id.* at 4. In significant part, Subsection C states:

2. Although EPA does not conduct inspections for occupational safety, in the course of an EPA inspection, EPA personnel may identify safety concerns within the area of OSHA responsibility or may receive complaints about the safety or health of employees relating to their working conditions. In such instances, EPA will bring the matter to the attention of OSHA designated contacts in the regional office. EPA inspectors are not to perform the role of OSHA inspectors; however, they will refer worker health and safety issues to OSHA pursuant to the procedures set forth in the MOU and implementing agency directives. *Id.* at 5.

Subsection 5 states:

5. . . . EPA will work to facilitate referrals to OSHA . . . of potential violations of occupational health and safety standards or regulations discovered by federal or state environmental inspection activities. *Id.* at 6.

**3. Under the Memorandum of Understanding EPA Has Agreed to Defer to OSHA on Worker Health.**

The MOU clarifies that EPA and OSHA have agreed to coordinate the activities of each agency with respect to potentially overlapping areas of jurisdiction, and that EPA will defer to OSHA on potential violations of OSHA standards that EPA may observe during EPA inspections. Clearly, the document does not authorize or suggest that EPA may, at its discretion, establish more stringent standards for worker health than those established by OSHA. Instead, the MOU directs EPA to inform OSHA when it has reason to believe that violations of OSHA worker health standards may be involved.

Applying EPA's risk-based standards to indoor air quality in industrial workplaces would result in more stringent exposure standards than those developed by OSHA through the rulemaking process. This would disregard the intent of the MOU. Disregarding OSHA regulatory standards in favor of EPA standards developed by guidance would not be consistent with the purpose of the MOU, which prescribes that the employees of each agency coordinate with the other agency by making appropriate referrals and identifying potential violations. The MOU directs that violations will be addressed under the properly-adopted regulatory standards of the agency with primary responsibility. Thus, OSHA is the agency with primary authority over worker health. If EPA were to enforce its own requirements with respect to worker health, that would directly conflict with the language and intent of the MOU.

#### **4. OSHA is the Logical Agency to Address Worker Health.**

OSHA is also the most appropriate agency to handle worker health because Congress has assigned the responsibility to protect worker health and safety to OSHA, and not to EPA. OSHA standards should apply to industrial workers who know that they are working with chemicals as part of their job, and who receive compensation for handling such chemicals. The industrial worker scenario is different from a situation where members of the general public are inadvertently and involuntarily exposed to environmental pollution. Industrial workers are monitored and protected as well as trained to handle hazardous chemicals. OSHA regulations require monitoring, protective equipment, and training. Thus, it is appropriate for a regulatory agency like OSHA to choose exposure limits for workers that are higher than is appropriate for the general public, for whom routine exposure monitoring and institutional protection against exposure are neither desirable nor practicable. In addition, it should be recognized that workers knowingly exposed to chemicals as part of their job receive a benefit (employment), while members of the public inadvertently exposed to environmental pollution receive no benefit from the risks of such exposure. Further, OSHA can adjust the occupational standards upward from strictly scientifically-based risk levels to account for non-health factors such as cost, technical feasibility, controls and monitoring, etc.

#### **C. EPA's Effort to Impose Risk-Based Standards by Guidance May be Illegal Rulemaking.**

Even if EPA had jurisdiction to establish standards to regulate indoor air in industrial workplaces, which it does not, there is no EPA RCRA regulation with requirements for indoor air, but merely EPA guidance from which the RCRA program has discretion to deviate. In the past, EPA has relied on the Draft Supplemental Soil Screening Guidance as authority for the position that OSHA standards are not applicable to protect industrial workers. The Office of Solid Waste and Emergency Response published the Draft Supplemental Soil Screening Guidance in March of 2001, and EPA has not issued it in final form. According to the Administrative Procedures Act, guidance is "a general statement[s] of policy or rules of agency . . . , procedure or practice." 5 U.S.C. § 553(b). In determining whether an Agency pronouncement is a rule, and not merely guidance, courts look at whether the agency itself gives the statement "binding effect." *See MolyCorp., Inc. v. EPA*, 197 F.3d 543, 545 (D.C. Cir. 1999). The court in *Appalachian Power Co. v. EPA*, 208 F.3d 1015, 1021 (D.C. Cir. 2000), stated that "[i]f an agency acts as if a document issued at headquarters is controlling in the field . . . , if it bases enforcement actions on the . . . interpretations formulated in the document . . . then the agency's document is for all practical purposes 'binding'." Some EPA regions have stated that they have no discretion to deviate from the Draft Supplemental Soil Screening Guidance. As a result, EPA has made this guidance document "binding" and elevated it to a rule without following the required rulemaking process.

Generally, failure to publish a notice of proposed rulemaking as required by the federal Administrative Procedure Act will result in the invalidation of the ensuing rule. *See Dow Chemical, U.S.A. v. Consumer Product Safety Comm'n*, 459 F. Supp. 378, 391 (W.D. La. 1978) (explaining that "[n]umerous cases have held that an administrative rule that is not issued in accordance with the prior notice and opportunity for public comment procedures of Section 553 of the APA is void"). *See also Clever Idea Co. v. Consumer Product Safety Comm'n*, 385 F. Supp. 688, 694 (E.D.N.Y. 1974); *Chicago, B.&Q. R. Co. v. United States*, 242 F. Supp. 414 (N.D. Ill. 1965), *aff'd* 382 U.S. 422 (1966); *Shell Oil Co. v. Federal Energy Administration*, 527 F.2d 1243 (Em. Ct. App. 1975).

As EPA has failed to follow the required rulemaking process, a court may find EPA's application of the guidelines under the Draft Supplemental Soil Screening Guidance to be illegal rulemaking. *See Dow Chemical*, 459 F. Supp. at 391.

**D. EPA's Reliance on Models to Determine Human Exposure Is Inappropriate.**

**1. The Johnson Ettinger Model Overpredicts Indoor Air Concentrations.**

OSHA has promulgated regulations to protect worker health and safety. Health and safety requirements specifically applicable to workers at hazardous waste facilities and to workers involved in the cleanup of such facilities were established by OSHA after consultation with EPA and can be found at 29 C.F.R. § 1910.120. While some states accept OSHA levels to determine if corrective action is required at a RCRA facility and what the nature and scope of such corrective action should be, some EPA regions and some states have recently taken the position that OSHA requirements intended to protect worker health and safety do not apply at corrective action sites with operating hazardous waste facilities. But EPA does not have jurisdiction to regulate indoor air at industrial workplaces and EPA guidance cannot supercede validly promulgated OSHA regulations. Nevertheless, EPA has determined that corrective action generally must be risk-based in order to protect human health and EPA has used risk-based standards and the Johnson Ettinger screening model ("J&E model") to determine whether indoor air concentrations pose a threat.

Complete reliance on models, particularly the Johnson Ettinger model, is inappropriate because the J&E model is highly inaccurate in estimating exposures and risks. This inaccuracy is due to the J&E model's overly conservative assumptions. As Mark Obmascik, a writer for the *Denver Post*, put it, relying on the J&E model amounts to relying on "hit-or-miss theoretical calculations rather than directly measuring what is in the air." (*EPA tests "crude, limited,"* *Denver Post*, Jan. 7, 2002, at 1, *available at* [www.DenverPost.com](http://www.DenverPost.com)). Edgar Ethington, the Colorado Department of Health and Environment commented, "Why does EPA keep using a computer model that doesn't work? With that model, you'd get just as good results flipping a coin. Half the time it's right, and half the time it is wrong." *Id.* There are three particular criticisms with respect to the J&E model's tendency to overpredict:

- 1) The J&E model may over-predict vapor concentrations at the source if the source is in the capillary zone and the groundwater level fluctuates.
- 2) The J&E model may over-predict vapor concentrations in the soil gas adjacent to structures some distance from the source.
- 3) Using the default input parameters, the J&E model may over-predict the rate of vapor transport from soil gas into structures.

The degree of over-prediction is addressed by Johnson, *et al.* (1999) in their defense of the accuracy of the J&E model. They compare field measurement data reported by Fischer, *et al.* (1996) to predictions of the J&E model and state that:

Thus, the indoor air concentrations are three orders of magnitude lower than predicted by the conservative layered geology algorithm. The agreement would be to within two orders of magnitude, rather than three, if the site-specific building characteristics and exchange rates reported by the authors were considered.

In other words, the J&E model over-predicted by a factor of 1,000x but if the building ventilation is taken into account, the J&E model only over-predicted by a factor of 100x. Johnson and others, cite this over-prediction by a factor of 100x or more as evidence that the model is reliable and accurate. Presumably, Johnson and others chose these data because such data offered at least typical agreement, if not superior agreement, among the various field data that could have been considered. This degree of over-prediction (i.e., 100x) is consistent with experience of some field investigators (Schmidt, et al., 2000) (Schmidt, 2001). Whether or not over-prediction by a factor of 100x or more is acceptable is, of course, subjective. If there are no better alternatives available, this degree of accuracy may, by necessity, be acceptable, at least for screening purposes. However, alternatives do exist.

## **2. Indoor Air Concentrations Are Best Determined by Sampling Indoor Air.**

The most obvious alternative is to test indoor air rather than rely on models. Scott Moyer, senior project manager for Hamilton Sundstrand, told *The Denver Post* he doesn't trust the J&E model and that "[t]here's no replacing an actual sample. . . . You just don't know what you are going to find until you get out there." *Id.* David Kurz, an engineer with Englewood, Colorado-based EnviroGroup, studied the J&E model's result compared to taking actual samples of hazardous gas levels. *EPA Risk Assessment Model Comes Under Fire*, ENVTL. LAB. WASH. REP., Jan. 31, 2002. He concluded that taking air samples is the best way to establish the extent of contamination and the need for mitigation. *Id.* When taking a second look at whether over-prediction by 100x is subjectively acceptable with the knowledge that there is a much more accurate alternative, it is difficult to find the error rates of the J&E model acceptable.

## **Conclusion**

EPA does not have jurisdiction to regulate indoor air in industrial workplaces. Even if EPA had jurisdiction, EPA cannot regulate by guidance, and EPA should not rely on models in lieu of collecting real data to determine if a health risk to industrial workers exists because of exposure to chemicals in indoor air. Congress has given OSHA the authority to regulate indoor air at the workplace and OSHA has set regulatory levels to protect worker health and safety. EPA's guidance on risk-based air concentration levels does not, and cannot, supercede the air concentration levels validly promulgated in rulemaking by OSHA for the protection of worker health and safety.

*This was  
handed out  
at EPA conference  
last year.*

*BES -  
copy*

# Vapor Intrusion and RCRA Corrective Action (CA) Environmental Indicators (EI) FACT SHEET

(Draft 6/17/03 Rev.)

## 1. What does USEPA recommend as the best way to address Vapor Intrusion for Environmental Indicator determinations in the time remaining before 2005?

EPA recommends that its November 2002 Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils be used to assess this pathway for the purpose of making RCRA Environmental Indicator (EI) determinations. Specifically, this would involve the use of the preliminary screening criteria in Tiers 1 and 2, and, if necessary, Tier 3 site-specific modeling for EI determinations. If scientific, site-specific models (such as the Johnson & Ettinger (1991) model spreadsheets found on the Superfund Program's website ([www.epa.gov/superfund](http://www.epa.gov/superfund)) or other appropriate models) do not indicate that the site has a potential to cause exposures above the applicable EI criteria (using site-appropriate input parameters), then this pathway should be considered to have been adequately screened for EI exposure assessment purposes. In such cases, we do not believe that confirmatory sampling will be necessary, for the purpose of making an EI determination. ✓

If Tier 3 models indicate a potential for exposure at levels above the applicable criteria, additional data gathering (e.g., sub-slab sampling or indoor air monitoring) or remediation may be needed to meet the human health environmental indicator.

## 2. What are the applicable criteria to use in determining whether the human health environmental indicator has been met for the vapor intrusion pathway?

For the purpose of making Current Human Exposure Under Control EI determinations with respect to vapor intrusion, EPA generally recommends the use of  $10^{-5}$  levels for carcinogens (incremental individual lifetime cancer risk), and a Hazard Quotient (HQ) of 1 for non-cancer risks.) (For occupational settings, see question 3 below.)

## 3. How is Vapor Intrusion into occupational and other non-residential settings to be evaluated for RCRA Environmental Indicators (EI) determinations?

*o Occupational settings where persons are in a working situation:* Such settings could include workplaces where workers are handling hazardous chemicals (e.g., manufacturing facilities) similar to or different from those in the subsurface contamination, as well as other workplaces, such as administrative and other office buildings where chemicals are not routinely handled in daily activities. OSHA and EPA ✓

have agreed that OSHA generally will take the lead role in addressing occupational exposures. Therefore, EPA does not expect the November 2002 Vapor Intrusion Guidance to be used in such settings (i.e., primarily occupational). Nevertheless, we recommend that such facilities be notified of the potential for this exposure pathway and that they consider any potential exposure that may result. ←

*o Non-residential settings where persons are in a non-working situation:* Non-residential buildings may need to be evaluated where people (typically non-workers) may be exposed to hazardous constituents entering into the air space from the subsurface. This would include, for example, buildings where the general public may be present, e.g., schools, libraries, hospitals, hotels, and stores. In these situations we believe the November 2002 Vapor Intrusion Guidance may be appropriate, although we recommend appropriate adjustments be made for non-residential exposure durations, the building specific air volumes and air exchange rates, as well as other relevant factors to be considered.

**4. How is future land use considered in making a RCRA Current Human Exposure Under Control EI determination for vapor intrusion?**

Environmental Indicators reflect current, not future or potential, conditions. Therefore, the guidance does not expect the overseeing agency to consider future land uses in determining whether a site meets the EI for vapor intrusion.



## HP PLAN TO TAKE BACK E-WASTE MAY INCREASE PRESSURE ON INDUSTRY

The recent unexpected announcement by a major electronics manufacturer that it would accept responsibility for managing its discarded products will increase the pressure on other companies to work with state regulators in the upcoming year, according to environmentalist and industry sources.

Hewlett-Packard (HP) stunned activists, industry and California regulators when it announced last month that it was willing to either take back the computer products it sells or underwrite the costs to recycle its market share of the state's waste stream. In addition, the company announced it will support a new e-waste bill similar to one that was bitterly opposed by the electronics industry and vetoed by California Gov. Gray Davis (D) in October.

HP's switch is placing a lot of pressure on other manufacturers to work with state regulators on e-waste, says one environmentalist, who calls HP "an industry leader on the environment." HP's action "is bold and shows where industry is going in the next year," the source says. "It drives a wedge in the industry. [The Electronics Industries Alliance (EIA)] can't say the industry opposes state efforts anymore."

The HP announcement comes as numerous states are planning legislation to address e-waste, which contains toxic components such as lead, cadmium and mercury. At least 10 states are reportedly interested in developing legislation based on a model bill being developed by an activist group known as the Computer TakeBack Campaign. *A list of the legislation's key elements are available on InsideEPA.com. See page 2 for details.*

The environmentalist says the legislation is designed to encourage product design changes that reduce the use of toxic materials. While the National Electronics Product Stewardship Initiative (NEPSI), a stakeholder panel comprising activists, industry and state regulators, has committed itself to exploring an advanced recycling fee, the source says such a "front-end financing system" is really only a short-term solution. "Assessing a nominal charge does nothing to drive design changes, which are most important for a long-term solution."

But the electronics industry, led by EIA, has refused to support state efforts, saying it prefers a national solution such as the one being sought by NEPSI. That effort has stalled in recent months because of internal division among industry about how such a national model could be applied equally to all vendors, as well as disagreement between industry and state regulators over who should bear the cost of collecting, storing and transporting discarded waste.

While sources say NEPSI is "still alive and kicking," industry and activists agree that it is unlikely to come up with a solution everyone can agree with any time soon. "TVs and computers just aren't cans and bottles," says one industry source. "NEPSI has approached this in terms of shared responsibility, but how to make the playing field level is the million-dollar question."

The activist agrees, saying chances of a national policy are "slim to none," and the switch in the Senate also makes it even less likely.

### Praising narrow scope

## INDUSTRY SUPPORTS EPA'S FIRST-EVER VAPOR INTRUSION GUIDANCE

Industry sources are supporting EPA's first-ever guidance for handling a source of indoor air contamination known as "vapor intrusion" into buildings from hazardous waste sites, primarily because the agency has decided to address only residential sites and not commercial properties.

EPA issued draft guidance Nov. 22, laying out the steps regulators should take to determine if there is a vapor intrusion pathway and whether the intrusion represents an unacceptable risk to public health. The guidance calls for a three-tier process, involving primary and secondary screening of a site, followed by a site-specific pathway assessment. Vapor intrusion refers to the process of toxic gases leaking into buildings from contaminated soil and groundwater. *The guidance is available on InsideEPA.com. See page 2 for details.*

The guidance is supposed to be used at Superfund and Resource Conservation & Recovery Act (RCRA) sites and at brownfields, and is part of the agency's effort to implement a RCRA environmental indicator (EI) for vapor intrusion. EPA uses EIs as a way to determine when a cleanup has cleared a site of the most threatening contamination. For vapor intrusion, the agency is required to have current human exposures under control at 95 percent of RCRA sites by 2005.

Originally industry sources had opposed the guidance as duplicative of requirements set in place by the Occupational Safety & Health Administration (OSHA) to regulate commercial properties (*Superfund Report*, Aug. 19, p15). But the agency makes clear that its guidance only applies to residential sites. "OSHA and EPA have agreed that OSHA will generally take the lead role in addressing occupational exposures," the guidance states.

An industry source says that companies that were worried about duplicative federal requirements are

supportive of the EPA guidance now that it only applies to residential properties, calling vapor intrusion a "legitimate path of concern."

Companies are "very pleased" that the agency is allowing OSHA to continue to handle commercial properties, the source says, because industry has already developed monitoring and informational programs to handle vapor intrusion at such sites. And the source says that residential standards would be too strict for commercial properties because individuals are at home for longer periods than at work, requiring a lower threshold than at a place of employment.

But there is some concern that EPA's guidance is too conservative, the source adds. The guide sets a risk-based standard for the concentration of indoor air contaminants that would trigger regulations of the waste stream. "[T]his guidance provides targeted indoor air concentrations set at  $10^{-4}$ ,  $10^{-5}$ , and  $10^{-6}$  (incremental individual lifetime cancer risk) levels . . .," the document states.

But the industry source says this flexibility will likely result in regulators choosing the most conservative concentration to regulate indoor air contamination. This uncertainty concerns industry officials who want to know what is expected of them, the source says. "Unfortunately, that leaves you wondering," and responsible parties are "less certain of what you're expected to do."

EPA officials could not be reached for comment.

## DENTISTS FIGHTING EFFORTS TO LIMIT MERCURY RELEASES FROM FILLINGS

The American Dental Association (ADA) is fighting growing state and federal efforts to limit releases of mercury into wastewater from dental fillings, which state officials and environmentalists estimate is responsible for as much as 40 percent of mercury releases into the wastewater stream.

The dental group presented to EPA officials Dec. 2 a draft report, *Evaluation of Mercury In Dental Amalgam Wastewater*, that finds that dental amalgam — which is an alloy of mercury and silver used in dental fillings — accounts for a very low percentage of total mercury releases in wastewater in the United States. The group is also promoting a new voluntary effort to reduce releases of mercury through existing best management practices (BMPs) already present in many dental offices, rather than through new technology that many states are considering mandating. Mercury is a potent neurotoxin when converted to its organic form, methylmercury. *The report is available on InsideEPA.com. See page 2 for details.*

But state officials and environmentalists are raising doubts about the initiative and the industry-funded report, saying the efforts are a ploy to forestall legislative action on mercury fillings at the state and federal levels.

New Hampshire earlier this year became the first state to require dentists to install amalgam separators that capture virtually all mercury that dentists might dump into the wastewater stream. Several other states are also considering legislation requiring the devices, which are already widely used in Canada and Western Europe. In addition, several House lawmakers introduced legislation earlier this year banning the use of mercury in dental fillings.

But ADA maintains that mandatory use of amalgam separators is unnecessary because in most cases, existing BMPs — including chair-side traps and vacuum filters — capture the majority of mercury releases from fillings. "ADA has identified a list [of BMPs] which in most places would be very adequate" to capture mercury releases, according to an ADA source. The association encourages the use of amalgam separators where appropriate, but opposes any mandatory requirements for the devices, the source says.

In addition, ADA maintains that the amount of mercury contributed from dentists is miniscule compared to the amount entering water supplies by airborne depositions from coal-fired power plants.

ADA is instead promoting a National Advocacy Initiative designed to educate dentists, regulators and policymakers about amalgam issues.

According to a draft copy of the accompanying report, which will be presented at an EPA Region 5 meeting on toxics in Chicago on Dec. 2, BMPs capture nearly three-quarters of the estimated 28.6 tons of mercury used and removed in fillings annually. The report estimates that only about 0.53 tons — about 1.86 percent — of the remaining mercury is released after the wastewater is treated at publicly owned treatment works (POTWs).

But state and activist sources say the report greatly overstates the ability of BMP devices and POTWs to capture mercury from dental fillings, and estimate the true amount of mercury released after treatment is closer to 40 percent. The report is "so fundamentally flawed from the outset that I didn't even begin to know how to address its deficiencies," says one state environmental official. "Dentistry is a big source of mercury in the environment and this report doesn't move us forward on the path toward controlling releases."

"It's absolutely ludicrous," says a source with the Mercury Policy Project (MPP). "I don't know how ADA or their consultant can say with a straight face that [POTW] can capture that much mercury." The source also discredits the report's findings on the high capture rate of BMPs. "Without amalgam separators, you can use

## SUPREME COURT UPHOLDS CLINTON-ERA UNDERGROUND COAL MINING RULE

The U.S. Supreme Court has upheld a contentious Department of Interior (DOI) mining rule dating from the Clinton administration that allows underground coal mining near sensitive areas such as homes, roads or national parks.

In an order released Feb. 23, the court denied a petition for *certiorari* by the Citizens Coal Council to review a June 2003 ruling by the U.S. Court of Appeals for the D.C. Circuit.

In *Citizens Coal Council v. Norton*, activists had argued that section 522(e) of the Surface Mining Control & Reclamation Act (SMCRA) – which limits coal mining near homes, roads and national parks and conservation areas – also applied to underground mining activity. In their challenge, activists maintained that subsidence – the collapsing of land from underground mining activity – triggered SMCRA.

But DOI and industry maintained that underground mining is not covered by SMCRA – the federal law governing coal mining – and that Clinton administration regulations allowed such mining in sensitive areas. Industry officials said the activists' interpretation would have greatly restricted access to coal.

In its ruling, the D.C. Circuit stated that it largely agreed with the activists' arguments, but said it was bound to defer to DOI.

resolved by a process where participants understand the issues best, and most importantly, the source explains, allows national courts to determine the proper interpretation of a federal law.

In the Glamis case, the NAFTA tribunal will hear an issue that has not yet been decided in U.S. courts – whether a state law designed to protect cultural resources violates the General Mining Law of 1872. "Interpreting U.S. law is supposed to be the province of U.S. courts and there can be no doubt that U.S. courts are more experienced in doing that than any other entity in the world," the source says.

The case is an "important reminder" that NAFTA allows "foreign investors the ability to avoid U.S. courts and their authoritative interpretation of U.S. law." That also gives foreign companies a right that U.S. companies do not have, the source adds.

A Glamis official did not return a call for comment on the claim.

## Policy

### STATES MAKE NEW PITCH TO EXPAND EPA'S WORKPLACE AIR TOXICS RULES

State regulators are making a new argument aimed at bypassing EPA concerns that regulating workplace exposure to indoor air toxics stemming from underground contamination would preempt Occupational Safety & Health Administration (OSHA) standards, according to EPA and state sources.

The states, with backing from some EPA regions, are arguing that the agency can avoid preempting OSHA authority by regulating only those air toxics that enter the workplace from underground sources and not from chemicals that are used in the workplace.

But the argument is facing skepticism from at least one senior EPA waste office source, who says OSHA generally regulates workplaces and "it does not matter if [the contamination] came from" outside the workplace. "I am not sure I would necessarily agree" with the states' new argument, the source says.

In addition, any decision to regulate the toxics would create a huge new universe of sites under EPA jurisdiction and could jeopardize the agency's ability to meet budget goals to limit exposure to contaminants from existing waste sites, industry sources say.

EPA sources say senior management is likely to consider the issue in the near future.

At issue are EPA efforts to regulate vapor intrusion, which refers to indoor air toxics emitted from underground contamination in structures adjacent to hazardous waste sites.

In 2002, EPA issued a draft guidance that explains the steps regulators should take to determine if there is a vapor intrusion pathway and whether the intrusion represents an unacceptable risk to public health. But the draft guidance generally limits EPA's authority to residential sites, not the workplace, because of concerns that it would preempt OSHA authority. "OSHA and EPA have agreed that OSHA will generally take the lead role in addressing occupational exposures," the guidance states, adding that "EPA does not expect this guidance be used for settings



that are primarily occupational.”

But state and regional regulators believe that OSHA’s standards, known as permissible exposure limits, are outdated and insufficiently protect human health.

The sources say officials from Kentucky, New York and other states have been urging the agency in monthly conference calls to expand the guidance’s scope to focus on workplace contamination in order to ensure protection from such exposure. The states believe that EPA could regulate contaminants not originating from workplaces.

At the same time, some EPA regions have begun reassessing the screening tool EPA uses to measure the risks vapor intrusion poses to determine whether it adequately measures exposures, including workplace exposures. One EPA regional source said recently that deficiencies in the risk tool may result in underreporting of actual risk.

The states’ proposal is “a rational approach,” another EPA source familiar with the issue says, adding that it is “hard to argue” the agency’s authority to protect human health and the environment does not include workplace exposures. The source adds that, in the past, agency officials have tried to win senior management support for this approach, “but it didn’t fly.”

But another state official says it would be difficult to distinguish between contamination that comes from workplace activities and from nearby hazardous waste sites. However, the EPA source says it is possible to do so.

At the same time, EPA officials are concerned that if they agree to address workplace exposures, the additional work would prevent the agency from meeting its 2005 goal to have current human exposures under control at 95 percent of sites regulated under the Resource Conservation & Recovery Act.

The goal is part of EPA’s effort to comply with the Government Performance & Results Act, a law that requires federal agencies to establish performance goals and report to Congress on their success in attaining them. Congress uses the goals, in part, to establish federal budgets.

The agency is “very focused” on meeting the goals, a private contractor says, and “they don’t want anyone to be late.” An industry source adds that the agency wants to “tread as lightly as possible” on the workplace issue before 2005. “I don’t get the sense that headquarters wants to delve into this issue, but they will be forced to by the regions and some of the states,” the source says. And the fact that the deadline for meeting the goals is only 18 months away is forcing the agency to make a decision on workplace exposure soon, the source adds.

The EPA source says meeting the budget goals is a central factor in the agency’s consideration of the issue. The source says EPA may try to meet the goal by prioritizing the greatest threats to workers before the 2005 deadline, while addressing less immediate threats later.

## WHITE HOUSE WOOS SCIENTISTS WHILE DENYING POLITICAL DISTORTIONS

The Bush administration’s top science adviser is rejecting criticism from a host of top scientists that the administration has censored or misrepresented scientific findings in order to fit its policy goals, but is acknowledging a deep rift between administration policymakers and the scientific community.

John Marburger, director of the White House Office of Science & Technology Policy (OSTP) is pledging to respond directly to the criticisms, but downplayed the extent of the problem. “They deserve additional response and we will organize that,” Marburger told reporters in a hastily organized teleconference Feb. 18 to respond to the charges.

However, Marburger disputed the criticisms, saying that while he thinks “it’s important to listen to the distinguished scientific leadership in this country and be square with them,” it is an overstatement to say “we have a big problem.” Marburger added that he would seek involvement from other federal agencies to dispel the notion that the White House will drive the response.

Marburger was responding to allegations from 60 top scientists, including 20 Nobel laureates, who warned in a report compiled by the Union of Concerned Scientists (UCS) that the Bush administration engaged in a broad campaign to manipulate scientific research, including research on global warming, mercury and other environmental regulations, to fit its policy goals. Former EPA Administrator Russell Train was among those contributing to the report.

“A growing number of scientists, policy makers, and technical specialists both inside and outside the government allege that the current Bush administration has suppressed or distorted the scientific analyses of federal agencies to bring these results in line with administration policy,” the report states. *The report is available on InsideEPA.com. See page 2 for details.*

UCS reviewed internal administration documents and conducted interviews with current and former government officials in compiling the report.

Marburger said there are no plans to act on UCS’ call to President Bush for a set of executive orders precluding distortion of research and tightening requirements for appointing members of federal advisory committees. He noted that while there may be a few instances where “people got their feathers ruffled,” the administration values the scientific community and if an impression of disrespect has been created, “We need to work on that.”

Marburger did not detail how or when the administration would reassure its scientific critics.

## EPA, STAFF AT ODDS OVER OSHA'S ROLE APPLYING VAPOR INTRUSION GUIDE

EPA managers and staff appear to be at odds over whether the Occupational Safety & Health Administration (OSHA) can regulate workplace exposures to indoor air pollution created at contaminated waste sites.

Last week, sources said an EPA workgroup was considering developing criteria for when OSHA could regulate workplace exposure to so-called vapor intrusion, after realizing they had issued a contentious waste guidance that OSHA's exposure standards would leave millions of workers unprotected.

But an EPA waste official says top office managers say there is no need for any criteria limiting OSHA's role.

In response to questions on the issue, an EPA spokesman released a statement reiterating past agency positions endorsing a limited EPA role. The statement says that facilities requiring regulation for vapor intrusion "be notified of the potential for this exposure pathway and that they consider any potential exposure that may result."

The dispute centers on the waste office's guidance for how regulators should assess whether there is a pathway for so-called vapor intrusion, and how to determine the potential public health risks, known as *Guidance for Evaluating Vapor Intrusion to the Indoor Air Pathway From Groundwater and Soils*. Vapor intrusion refers to air pollution that seeps into buildings from air or soil contamination under the buildings. The guidance calls for a three-tiered approach for assessing vapor intrusion, including primary and secondary screening of a site followed by a site-specific pathway assessment. EPA intends to use the guidance at Superfund, Resource Conservation & Recovery Act (RCRA) and brownfields sites.

An earlier version of the guidance released last November drew strong criticism from industry officials, who charged that it was duplicative of OSHA standards. In response, EPA revised the guidance by adding language giving OSHA authority over workplace exposures. "OSHA and EPA have agreed that OSHA generally will take the lead role in addressing occupational exposures . . . EPA does not expect this guidance be used for settings that are primarily occupational," the revised document says.

However, EPA regional officials have criticized the guidance as being insufficiently protective. In comments submitted to agency headquarters earlier this year, risk assessors from every EPA region urged the agency to expand the reach of the document to occupational settings.

But an EPA source says the agency did not realize when the draft was completed that OSHA's baseline for determining that vapors represent a health risk is a million times less stringent than the EPA standards. The source says the agency also did not consider the impact of not including specific requirements for when the agency could transfer workplace exposure assessment to OSHA. The solution to the problem, the source says, may be for the agency to develop specific criteria that must be met before vapor intrusion sites can be passed on to OSHA.

Henry Schuver, who authored the guidance, said recently that failure to correct the issue when implementing the guidance could leave workers exposed to levels of hazardous waste that the agency considers a significant health threat.

Some sources also said that an EPA workgroup was considering whether to come up with criteria limiting OSHA's role. According to the source, an EPA workgroup is considering this idea, but has no timeline for reaching a conclusion. This guidance is "something that needs to be improved upon," the source says, "We're trying to do the right thing."

EPA's consideration of criteria limiting OSHA's role comes amid widespread concerns from industry officials that the guidance would leave them vulnerable to a wave of litigation over health concerns because of the conservative health estimates the document contains. Industry claims those conservative estimates lead to grossly overestimated health risk projections. Industry officials also say EPA has no authority to regulate the workplace.

The EPA source adds that industry officials have told the agency they want clarification as soon as possible because of the potential for greater liability if the more stringent EPA standards are used.

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